SONY

Stereo Video Cassette Recorder 8



3002699 SONY BDA

EVS550E

EV-5550E

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.



Video 8

MARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

NOTICE FOR THE CUSTOMERS IN THE UNITED KINGDOM

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows: The wire which is coloured blue must be connected to the terminal which is marked with letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Do not connect either wire to the earth terminal in the plug which is marked by the letter E or by the safety earth symbol \perp or coloured green or green-and-yellow.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

On colour broadcasting systems

The Continental Europe and UK models of EV-S550E are designed to record and play back using the PAL colour system. Recording and playback of video sources based on other colour systems cannot be guaranteed.

Caution

Television programs, films, video tapes and other materials may be copyrighted.

Unauthorized recording of such materials may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmitter and/or programme owner.

Algorithms Weintel

This manual covers the UK and Continental Europe models of EV-S550E.

 The principle difference between the two models are as listed below:

	UK model	Continental Europe model	
Operating power voltage	240 V AC	220 V AC	
Channel coverage	UHF B21 to B68	VHF E2 to E4, E5 to E1 UHF E21 to E69 Cable TV channels S01 to S03, S1 to S20, S21 to S41	
Reception of Zweiton broadcast	Not provided	Provided	
PCM recording PCM indicator	Not provided	Provided	
AUDIO DUB indicator PCM indicator AUDIO DUB button (Main unit and Remote commander) MIC jack REC LEVEL controls AUDIO MONITOR selector NORMAL/CATV button DC OUT FOR CAMCORDER jack	Not provided	Provided	

- In this manual, the functions not provided on the UK model are referred to as "not provided on UK model".
- The illustrations used in this manual are those of the Continental Europe model. Any differences in the appearance and the operation of the UK model is clearly mentioned in the text.
- The Continental Europe model is designed for the following cuntries: Sweden, Norway, Finland, Denmark, Spain, and Belgium.

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DEPTH VES

PCM audio recording system (not provided on UK model)

This feature allows you to take advantage of the latest technology in high-grade audio systems.

Hi-Fi stereo recording and playback

You can enjoy dynamic Hi-Fi stereo sound by connecting your audio system to this VTR.

EDIT SHUTTLE for easy editing

You can search for a desired editing point quickly by turning the EDIT SHUTTLE control clockwise or counterclockwise.

Useful tape counter

The tape counter clearly indicates the number of hours, minutes and seconds that have elapsed during recording or playback operations.

· Easy editing with a Sony 8mm Camcorder

The LINE IN AUDIO/VIDEO and DC OUT jacks on the front panel allow for easy connection of the Sony 8mm Camcorder. The DC OUT (7.5V, 1.6A) jack* supplies power for the camcorder so that it can easily be used to perform editing.

* DC OUT jack is not provided on UK model.

• CONTROL L & (LANC) jack

When using this jack to connect another video peripheral such as a VTR, tape transportation for the other peripheral can easily be controlled on this unit. Furthermore, you can control both devices simultaneously for bilateral synchronized editing.

REC LEVEL control for audio dubbing (not provided on UK model)

This control knob is used to adjust the audio level for each scene when audio dubbing.

Remote Commander with LCD

You can preset this VTR to show or record programmes (timer setting) automatically using the Remote Commander with LCD. Almost all operations can be done by using this device.

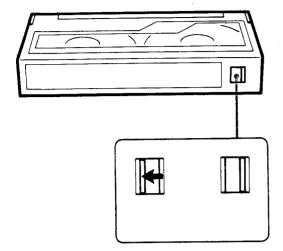
Six event timer

Each month up to six preselected programmes can be set for recording with this timer.

This unit uses 8mm video format cassettes.

It records in the SP mode (approximately 20.051 mm/second) and the LP mode (approximately 10.058 mm/second) and can play back in the SP mode and the LP mode.

This unit is equipped with PCM (digital audio) recording/playback functions. (Not provided on UK model)



To prevent Accidental Erasure

Slide out the tab on the cassette so that the red colour appears.

To re-record on the cassette, slide the tab back.

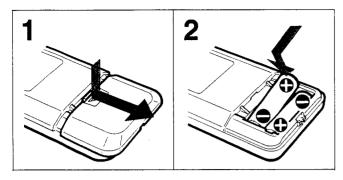
Tape Speed

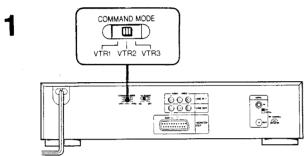
The LP mode is twice as long as the SP mode. For better picture, recording in the SP mode is recommended. During playback, the mode in which the tape was recorded is selected automatically.

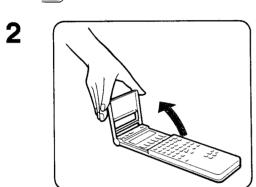
	Tape speed		
Cassette used	SP	LP	
P5-15MP	15 min.	30 min.	
P5-30MP	30 min.	1 hour	
P5-60MP	60 min.	2 hours	
P5-90MP	90 min.	3 hours	

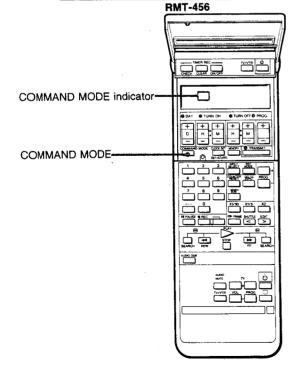
Notes

- Always insert the cassette in the correct direction.
- Never insert anything in the small holes on the rear of the cassette.
- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.
- To record from the beginning of the tape, run the VTR for about 15 seconds at the beginning of a cassette before recording. It will avoid missing the starting point during playback on a VTR.
- When the VTR is not in use, remove the cassette.









Battery Insertion

- 1 Slide and remove the cover.
- 2 Insert two R6 (size AA) batteries with the correct polarity.
- **Q** Close the cover.

The clock on the Remote Commander will read

Set the date and clock referring to "Setting the Clock".

Setting the Remote Commander to control your VTR

This Remote Commander can be used to control three different types of Sony VTRs. The Remote Commander identifies each VTR by its command mode setting.

Setting the command mode on this VTR

- Set the COMMAND MODE selector on the rear panel of the VTR to the desired position, VTR1, VTR2 or VTR3. Set normally to VTR2.
- Press the COMMAND MODE button on the Remote Commander to display the same position, which has been set on the VTR, in the LCD. Then the VTR can be operated with the Remote Commander.

Remotely controlling other Sony VTRs

Controlling another VTR equipped with the command mode selector

Set different command modes for this VTR (VTR2, for instance) and the other VTR (VTR1). Select the identical command mode set on each VTR on

the Remote Commander. For instance, select VTR1 on the Remote Commander to control the other VTR and VTR2 to control this VTR.

Controlling another VTR without a command mode selector

Change the setting on the Remote Commander according to each type of VTR as follows:

VTR1: Sony Betamax ® VTRs VTR2: Sony 8mm VTRs (this VTR)

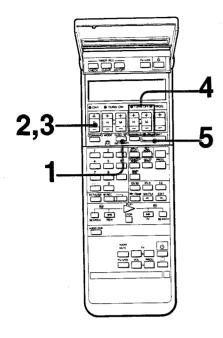
VTR3: Sony WHS VTRs

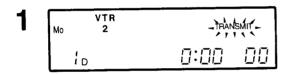
Note on batteries

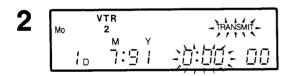
· On battery life

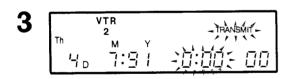
Under normal operation, batteries will last for about 6 months. When the batteries are exhausted, the remote function will not be operated when the buttons on the Remote Commander are pressed. Replace all the batteries with new ones.

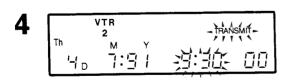
- · Insert batteries correctly according to their polarities.
- Do not use a new battery and an old one together. Batteries of different types also should not be used simultaneously.
- If the Remote Commander is not to be used for a long time, remove the batteries to avoid possible damage from battery leakage.











Set the date and time (clock) on the Remote Commander. Then transmit it to the VTR.

The time and date between the years 1990 and 2005 can be set.

Operation

Example: To set to 9:30, Thursday, July 4, 1991.

- 1 Open the cover and press the CLOCK SET button.
- Press the D+ (day) button until "7 M 91 Y" is displayed.

The day will be advanced slowly up to 30 (31) days ahead and then the month will be advanced. When the number of the desired month has appeared, release your finger from the button.

- Press the + side or side of the D (day) button until 4 D is displayed.

 The day of the week appears automatically.
- 4 Press the H (hour) and M (minute) buttons under 3 TURN OFF to set to 9:30.
- 5 Point the Remote Commander at the VTR and press TRANSMIT.

A beep sound confirms that the date and clock setting is registered in the VTR as well.

The clock on the VTR will start counting and displaying the seconds in the LCD.

6 Check the display window on the unit and close the cover.

When "0:00" is blinking on the unit

If the power is interrupted for more than one hour, "0:00" will blink in the display when the power is restored. You will have to reset the date and clock again.

When a short beep sounds repeatedly

The VTR is in the timer recording or quick timer recording mode and the setting cannot be transmitted.

When the batteries are replaced

Reset the clock correctly.

When the clock on the Remote Commander is correct but the one on the unit is incorrect

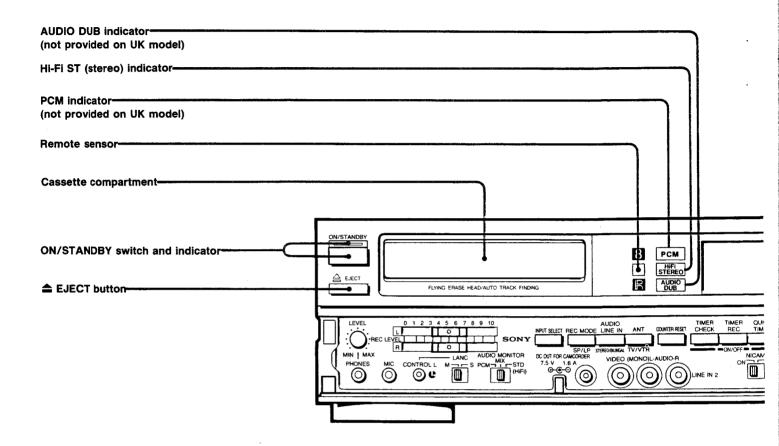
- Open the upper cover of the Remote Commander and press the CLOCK SET button.
 The correct time is displayed in LCD.
- Point the Remote Commander to the unit and press the TRANSMIT button.

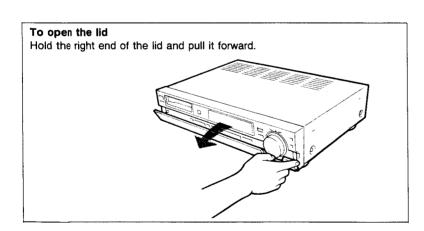
The present time is correctly transmitted in hours, minutes and seconds.

Location and Eunction of Parks and Controls

Front panel

Refer to the pages indicated in ● for details.





Supplied accessories

Remote Commander RMT-456 (Continental Europe model) (1) RMT-464 (UK model) (1)



Audio connecting cord (1) (phono 2 ↔ phono 2)

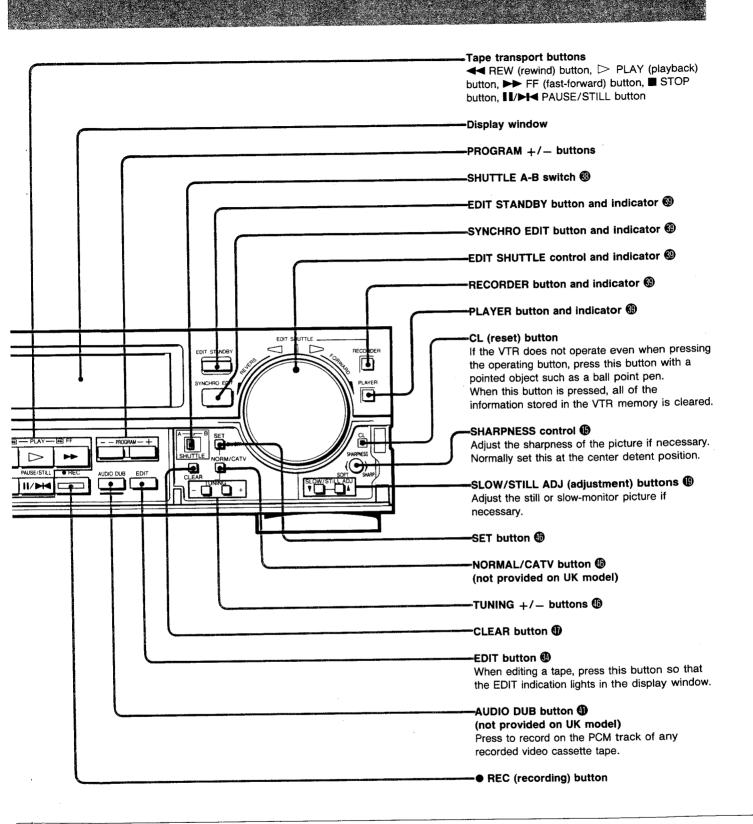
Video connecting cord (1) (phono 1 ↔ phono 1)

Size AA (R6) batteries (2)









LANC cable (1)

75 ohm coaxial cable for TV (1)



DC in cord (1) (not supplied on UK model)

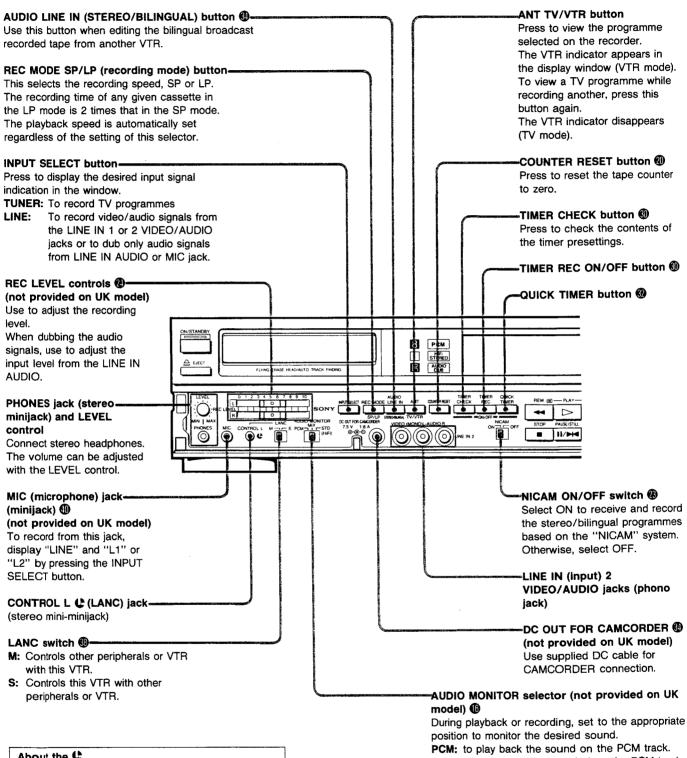


Power cord (1) (not supplied on Continental Europe model)



Screwdriver (1)

Front panel



About the C

means the LANC connector.

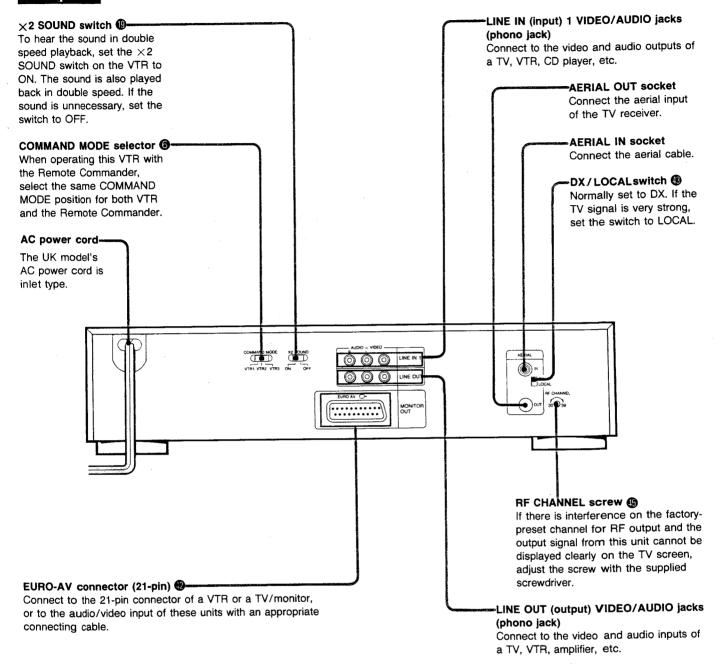
LANC stands for Local Application Control Bus System. The LANC connector is used for controlling the tape transport of video equipment and peripherals connected to it. This connector has the same function as the connectors indicated as CONTROL L or REMOTE.

When nothing is recorded on the PCM track, the recorded sound on the standard track is played back regardless of the position of this selector.

MIX: to play back the sound on the PCM and standard tracks simultaneously.

STD: to play back the sound on the standard track.

Rear panel



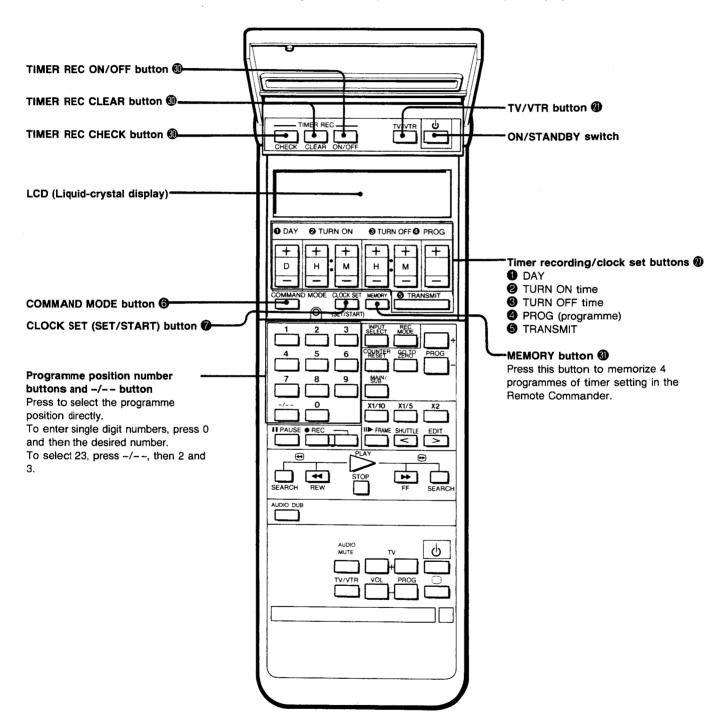
Remote Commander RMT-456 (Continental Europe model)/RMT-464 (UK model)

Almost all operations can be done with this Remote Commander.

Buttons on this Remote Commander have the same functions as those on the VTR.

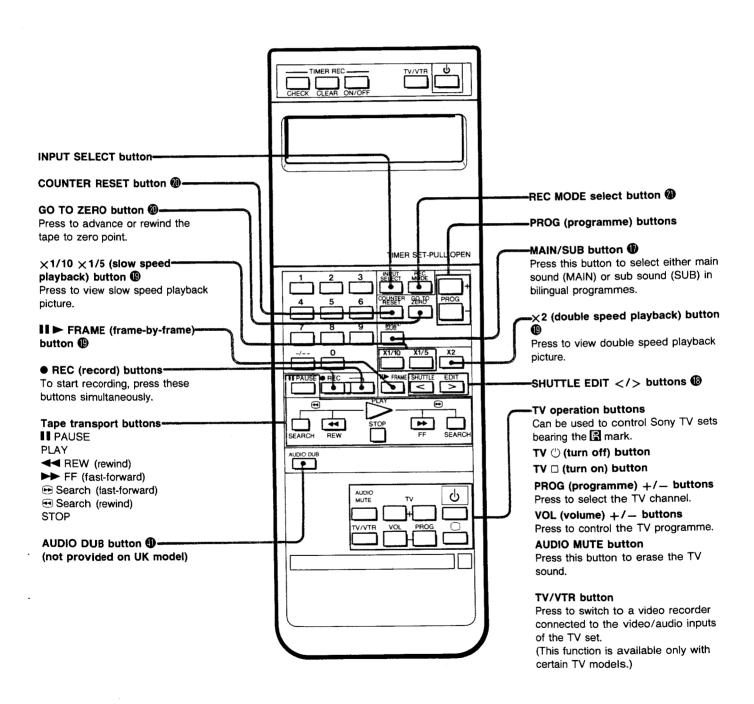
- · Operate the Remote Commander keeping the upper cover closed except when adjusting the Clock Setting or Timer Setting.
- INPUT SELECT button and REC MODE select button

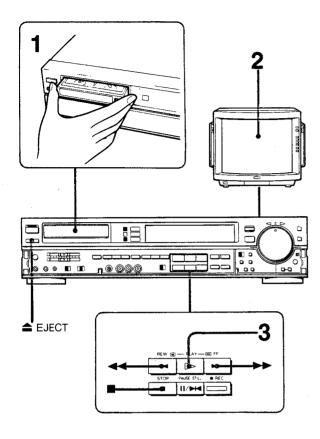
When the upper cover is closed, these are used for setting the input select and the present recording mode respectively. When opened, the input select and the recording mode to be preset are selected respectively by these buttons.

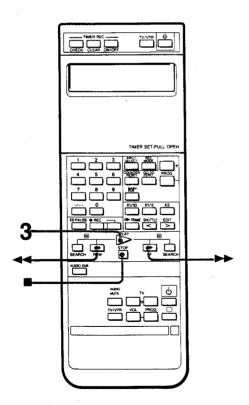


Remote Commander Precautions

Do not let sunlight or light from a powerful artificial light source fall directly on the Remote Commander sensor on the front panel as it may interfere with operations or damage the sensor.







Playback can be controlled with the identically marked buttons on both the unit and the Remote Commander. For details on connecting, see page 42.

Playing a Tape

- 1 Insert the cassette slowly into the unit. The power turns on automatically.
- 2 Turn on the TV and select the programme, or select the input for the VTR.
- Press the ▷ PLAY button. ▷ appears in the display window and playback starts.

Caution

Beware that children do not insert their fingers into the cassette compartment. Doing this may cause injury.

To stop playback

Press .

To rewind the tape

Press ◀◀. << appears in the display window on the unit.

To advance the tape rapidly

Press ▶▶. ▷▷ appears in the display window on the unit.

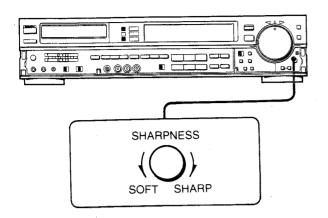
To eject the cassette

Press \(\begin{align*} \text{EJECT on the unit. Pressing the } \begin{align*} \text{EJECT button} \\ \text{when the VTR is turned off will turn the unit on, eject the cassette, and then turn it off again.} \end{align*}

▲ EJECT does not function during recording or recording pause mode.

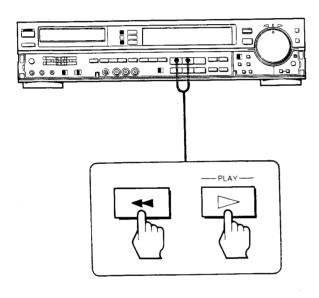
Note

When the end of the tape is reached during playback, the VTR automatically rewinds the cassette.



Picture adjustment

Turn the SHARPNESS control toward SOFT or SHARP. Normally set to the center of the control.



Playing back a tape from the beginning after rewinding - Auto Play

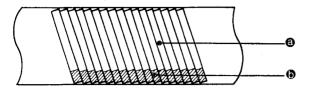
While pressing the $\blacktriangleleft\blacktriangleleft$ REW button, press the \triangleright PLAY button. The "AUTO" indication will be displayed in the display window on the unit.

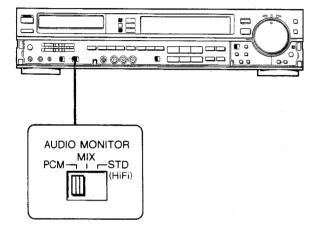
To index through a tape

Press the COUNTER RESET button at the beginning of a tape to set the counter to "0H00M00S". A convenient way to search a desired scene later is to make a note of the counter reading at that point. (Refer to page 20.)

When a blank tape is played back,

The picture will not appear and the tape counter will not function.





Dubbed Tape Playback (not provided on UK model)

Enlarged diagram of tape

- Standard track Original sound
 PCM track Dubbed sound

Sound to be played back	Position of AUDIO MONITOR selector
Dubbed sound	PCM
Original sound	STD
Both sounds mixed	MIX

When there is no sound during playback or the PCM indicator blinks:

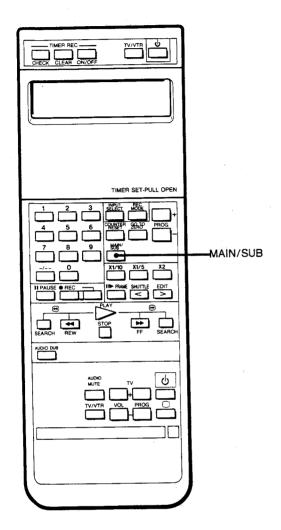
When a tape which has been recorded on a video camera recorder or a VTR without the PCM function is played back on this unit, the sound may not be heard or be heard only intermittently.

in such a case, select STD on the AUDIO MONITOR switch. The PCM indicator may keep blinking but it will not affect the sound.

When a TV without VIDEO/AUDIO input is connected: To monitor the playback sound in stereo mode, connect a stereo system additionally.

When no recording is on the PCM track:

If the AUDIO MONITOR switch is selected to PCM or MIX, the standard track will be played automatically.

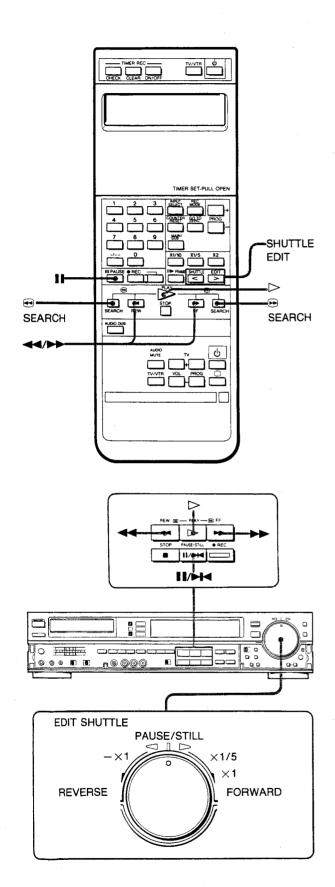


Selecting the Playback Sound of a Stereo/Bilingual Tape

Choose the desired sound to be played back with the MAIN/SUB button on the Commander.

Type of tape	MAIN/SUB button and indicator
Stereo	Each press changes the playback sound to:
	STEREO (stereo sound) ←
	L (left channel)
	R (right channel)
Bilingual	Each press changes the playback sound to:
	MAIN/ (main sound) SUB/ (sub sound)
	MAIN/SUB/
	(main/left channel and sub/right channel)

When a TV without VIDEO/AUDIO input is connected: To monitor the playback sound in stereo mode, connect a stereo system additionally.



Playing back in Various Modes

Still picture

Press the ▮▮/▶▮◀ PAUSE/STILL button on the unit or ▮▮ PAUSE button on the Commander during playback. The ▮▮ will appear in the display window.

To resume normal playback, press the ▷ PLAY button, or the II/▶I◄ PAUSE/STILL button or II PAUSE button on the Commander again.

When the pause mode lasts for more than approximately 7 minutes, it will be automatically released and the VTR will resume the playback mode.

Locked picture search (Commander only)

Press the SEARCH ⊕ or ⊕ button during playback or in still picture mode. To resume normal playback, press the ▷ PLAY button.

Picture search

Keep pressing the ◀◀ REW or ▶▶ FF button during playback or in still picture mode. Release the button for normal playback.

FR picture search

Press ►► during fast-forward or ◄◄ during rewind mode. The fast-forward or rewind mode picture can be viewed while the button is pressed.

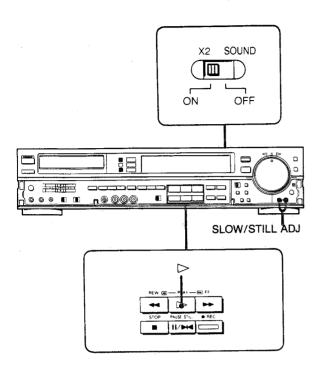
Using the EDIT SHUTTLE (Main unit only)

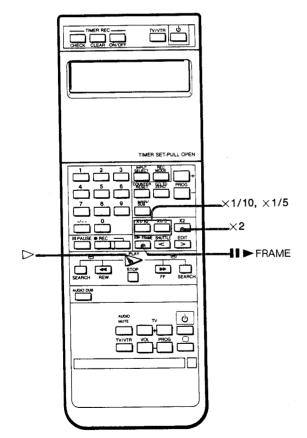
Various playback modes can be selected by holding the EDIT SHUTTLE in the position illustrated. Turn it clockwise for forward direction and counterclockwise for reverse direction. Releasing it will place the picture in the pause/still mode. To resume normal playback, press or

Using the SHUTTLE EDIT (Commander only)

Rewind playback (<) or normal playback (>) can be done by holding down the < or > button on the Commander in still picture mode.

Releasing it returns the VTR to still picture mode.





Double speed playback (Commander only)

To view the double speed playback picture, press the $\times 2$ button during playback or still picture mode. If the $\times 2$ SOUND switch on the rear panel of the unit is set to ON, the sound is also played in double speed. If OFF, no sound is heard.

To resume normal playback, press the \triangleright PLAY button.

Slow speed playback (Commander only)

Press the $\times 1/10$ or $\times 1/5$ button during playback or in still picture mode.

To resume normal playback, press the \triangleright PLAY button.

Frame-by-frame playback (Commander only)

Press the ■■ ► FRAME button in still picture mode.

To resume normal playback, press the ▷ PLAY button.

If the picture shakes during double speed playback or still picture:

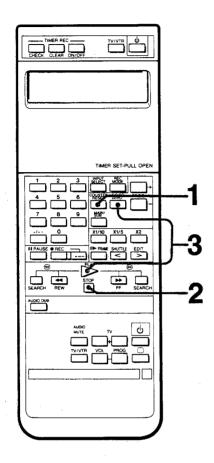
Press the SLOW/STILL ADJ buttons to adjust to the least shaking point.

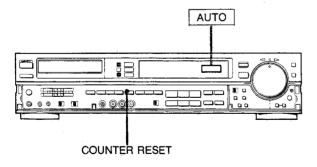
If noise bars appear on the screen during slow playback:

Press the SLOW/STILL ADJ buttons to squeeze them out. Adjust this for each playback speed (SP/LP).

Notes

- Noise bars will appear and the sound will be muted in the high-speed playback mode.
- Horizontal bars appear at the top and bottom on the screen and sounds are not heared during -x1 playback.
- When a cassette recorded in SP mode is played back in still
 picture or picture search mode, the picture may appear in black
 and white or shake depending on the TV being used.
- When a cassette is recorded in SP mode, noise bars will be wider than those on LP-recorded cassettes.





Using the Tape Counter

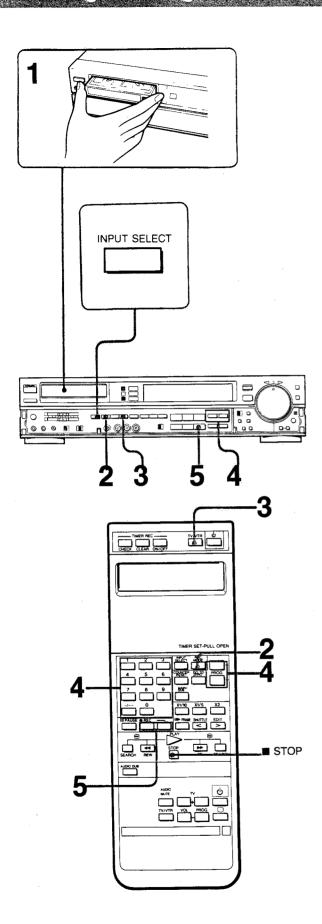
The COUNTER RESET buttons on the unit and on the Remote Commander have the same function. Press the COUNTER RESET button at the beginning of the tape so that the counter shows "OH00M00S". By noting the counter reading at a particular point, you can easily find that point later by referring to the tape counter.

To locate a particular point on the tape (auto play)

- 1 During playback or recording, press the COUNTER RESET button at the point to be located later.
 The counter is reset to "0H00M00S".
- When playback or recording is finished, press the STOP button to stop the tape.
- Press the GO TO ZERO and ▷ PLAY buttons.
 The "AUTO" indication will be displayed.
 The tape is rewound or advanced to the approximate "0H00M00S" point and played back automatically.

Notes

- When only the GO TO ZERO button is pressed, the tape will stop at the approximate "0H00M00S" point (tape return).
- The GO TO ZERO functions only when the counter reading is beyond ±1 minutes.
- The counter reading and the point of the tape may not correspond exactly. Use the counter as a guide.
- The counter does not operate for a blank, unrecorded portion of a tape.
- There will be a time lag of several seconds on the counter reading after repeated fast-forward and rewind operations.
- There will be also a time lag of several seconds when the tape recorded in LP and SP modes mixed or the tape having a blank portion between the recorded portions are played back.



Before recording

- Turn on the TV and select the channel for the unit or select the input for the VTR*.
- Press the INPUT SELECT button so that the TUNER indication appears.
- * If your TV/monitor is equipped with video/audio inputs, select the correct input on your TV/monitor.

Operation

- 1 Insert a cassete.
 The VTR will be turned on automatically.
- 2 To select the recording mode, SP or LP. Press the REC MODE button.
- 3 Select VTR on the TV/VTR button when the VTR is connected to TV without video/audio input jacks. (VTR connection is made via the AERIAL OUT socket.)

The "VTR" indication will be displayed.

- 4 Select the programme position to be recorded.
- 5 Start recording by pressing the ●REC button(s). To do this on the Commander, press both ●REC buttons simultaneously.

To stop recording

Press the ■ STOP button.

To stop recording for a moment:

Press the **II/** PAUSE/STILL or **II** PAUSE button on the Commander.

To resume recording, press the button once again. (To protect the tape and video heads, the pause mode is cancelled after about 7 minutes and the unit will enter the stop mode automatically.)

When the end of the tape is reached by recording, the VTR automatically rewinds the tape to the beginning and enters the stop mode. The power remains on.

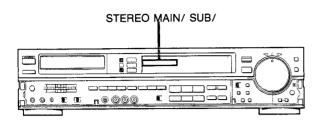
If the tape is ejected when the ●REC button(s) are pressed

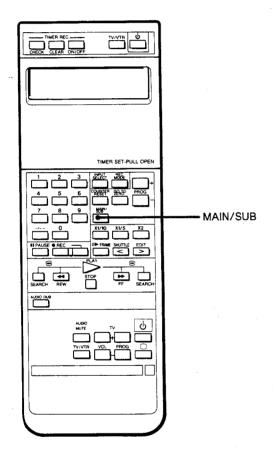
The tab on the cassette is slid out. Slide the tab in, or use a new cassette.

Viewing One TV Programme While Recording Another

Press the TV/VTR button so that the VTR indication disappears. Select the channel you want to view on the TV.

If your TV is equipped with a TV/VTR INPUT selector, simply select TV and then the desired channel on the TV.





Recording Stereo or Bilingual

About Zweiton system (not provided on UK model)

This VTR receives and records stereo/bilingual programmes based on the "Zweiton" system adopted in West Germany.

When receiving a stereo programme

The "STEREO" indication will be displayed in the display window.

The MAIN/SUB button does not function for the stereo programme of the Zweiton system.

When recording bilingual programme

The "MAIN/" indication will be displayed in the display window.

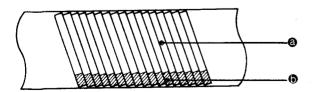
If desired, it is possible to select the monitor sound. Press the MAIN/SUB button repeatedly until the desired sound is heard. The sound is selected cyclically in the following order.

Display Sound to be heard			
MAIN/	Main sound		
SUB/	Sub sound		
MAIN/ SUB/	Main sound on the left channel and sub sound on the right channel		

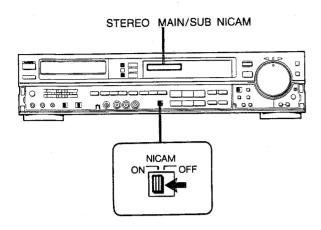
Recording is made as follows:

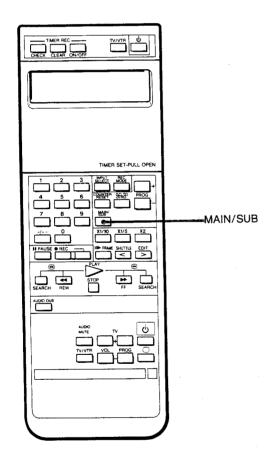
A stereo or bilingual programme will be recorded on the standard track (Hi-Fi stereo) and PCM track as listed below, regardless of the sound being monitored.

Track		Sound to be recorded		
		Stereo	Bilingual	
PCM and	Left channel	Left channel	Main	
Standard (Hi-Fi)	Right channel	Right channel	Sub	



- Standard track
- PCM track





About NICAM system

The EV-S550E receives and records stereo/bilingual programmes based on the "NICAM" system. Note, the UK model can only receive NICAM programmes broadcast within the United Kingdom. Also, the Continental Europe model cannot receive NICAM programmes broadcast in the United Kingdom.

To receive "NICAM" broadcasts, set the NICAM switch to ON. If you do not wish to receive the NICAM system, set the NICAM switch to OFF.

When receiving a stereo programme

The "STEREO" and "NICAM" indications will be displayed in the display window.

The MAIN/SUB button does not function for the stereo programme of the NICAM system.

When recording a bilingual programme

The "NICAM" and "MAIN/" indication will be displayed in the display window. If desired, it is possible to select the monitor sound. Press the MAIN/SUB button repeatedly until the desired sound is heard. The sound is selected cyclically in the following order.

Display	Sound to be heard
MAIN/NICAM	Main sound
SUB/NICAM	Sub sound
MAIN/SUB/ NICAM	Main sound on the left channel Sub sound on the right channel

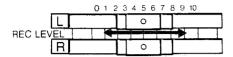
Recording is made as follows:

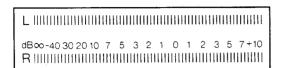
A stereo or bilingual programme will be recorded on the standard track (Hi-Fi stereo) and PCM track as follows, regardless of the sound being monitored. (PCM function is not provided on UK model.)

		Sound to be recorded		
Tra	ck	Stereo	Bilingual	
PCM and	Left channel	Left channel	Main	
Standard (Hi-Fi)	Right channel	Right channel	Sub	

Understanding the NICAM broadcast

NICAM broadcasting has two-channel digital sounds called NICAM L and R channels in addition to the standard sounds. The NICAM L and R are assigned to the stereo left and right channels or the main and sub sounds of a bilingual programme. The standard sound of most NICAM broadcasts is the mixed sound of the left and right channels for a stereo programme, and the main sound for a bilingual programme.



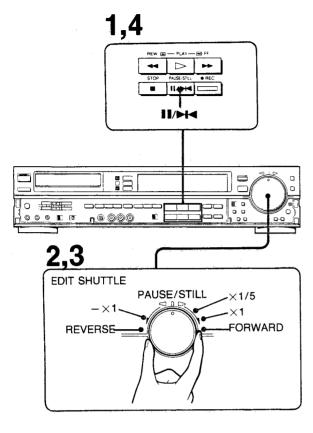


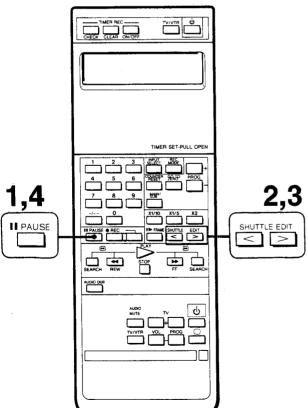
Adjusting the Recording Level (not provided on UK model)

- Recording from the tuner on the unit
 To obtain the best recorded sound, set the REC LEVEL controls at 5 position.
- Recording from an external sound source
 Adjust the level on the REC LEVEL controls according to the source.
- Appropriate recording level
 Medium or lower frequency signals from a source (e.g.vocal)
 Adjust so that the element at the 0 dB level lights at the
 highest signal level.

Mediun or higher frequency signals from a source (e.g. trumpet, treble sound of violin)

Adjust so that the element at the -1 to -3 dB level lights at the highest signal level.





Cutting Out a Scene by Recording Over It

Overview

Using the recording pause mode, you can stop recording when an unwanted scene appears and then resume recording smoothly.

To easily reach an unwanted scene by rewinding and/or advancing the tape, use the SHUTTLE EDIT buttons on the Commander or the EDIT SHUTTLE on the unit. The unit will then enter the recording pause mode and allow you to resume recording smoothly.

Operation

1 While recording TV broadcast, press II PAUSE on the Commander or II/▶I◄ PAUSE/STILL on the unit.

The unit will enter the recording pause mode.

2 Rewind the tape with the SHUTTLE EDIT </>
buttons on the Commander or the EDIT SHUTTLE control on the unit to locate the point to resume recording.

Using the EDIT SHUTTLE

Turn counterclockwise to search in reverse.

Turn clockwise to search in forward.

The playback speed is as indicated in the illustration.

Using the SHUTTLE EDIT </>

Press < to reverse the picture (\times 1 speed).

Press > to advance the picture (\times 1 speed).

Release the SHUTTLE EDIT button or the EDIT SHUTTLE control at the desired point.

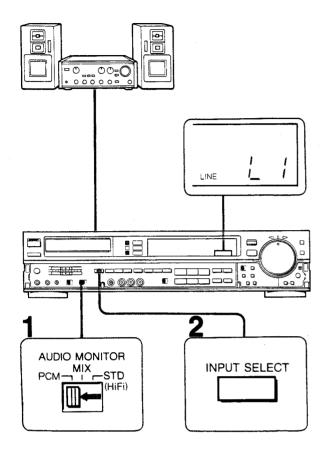
The unit enters the recording pause mode after approximately 2 seconds.

Press the II PAUSE button on the Commander or the II/►I PAUSE/STILL button on the unit when you wish to resume recording.

Note

To protect the tape and video heads, the pause mode will be automatically released after about 7 minites and the unit will enter the stop mode.

PCM Audio Recording (not provided on UK model)



Only the audio signals are recorded on the PCM track.

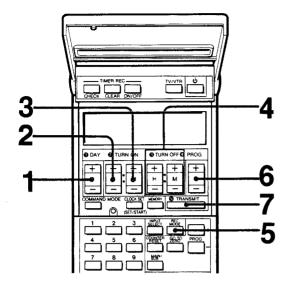
Normally adjust the REC LEVEL control to 5 position. To record both the video and audio signals, connect the video equipment to the LINE IN VIDEO jack. Then audio signals from the audio system are recorded on PCM track and video signals via LINE IN VIDEO are recorded on the standard track.

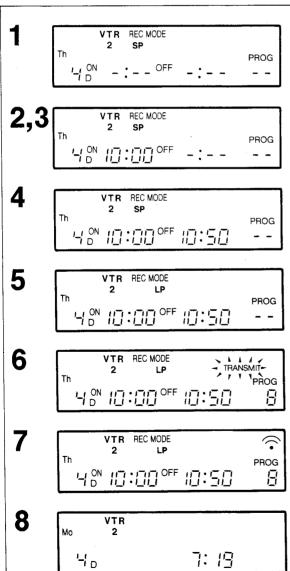
For details on connecting, see page 44.

- 1 Set the AUDIO MONITOR selector to PCM.
- Press the INPUT SELECT button.
 The "L1" indication will appear in the display window.

Note

When a digital audio processor that does not conform to the 8mm format standard is used, select the SP mode and press the EDIT button so that the "EDIT" indication lights.





Set the programme on the Commander, then transmit it to the unit.

The timer can be set to record up to six timer setting programmes on certain days or every day within one month.

Presetting can be done even if power is turned off or the VTR is in recording pause mode.

Su	Мо	Tu	We	Th	Fr	Sa	
		1	2	3	4	5	Today
6	7	8	9	10	11	12	
13	14	13	16	17	18	19	
20	21	22	23	24	25	26	Possible days
27	28	29	30	1	2	3	for recording
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	J
18	19	20					

Before timer setting

- Check that the clock on the unit is correct and that it corresponds to the clock on the Commander.
 For setting instructions, see page 7.
- Make sure the cassette is long enough to record all of the programmes.
- Be sure the safety tab of the cassette has not been slid out.
- Press the INPUT SELECT button so that the TUNER indication appears.

Setting the Timer

Example: To record a programme broadcast from 10:00 to 10:50 on Thursday, July 4, 1991 on programme position 8 in LP mode.

1 Open the cover of the Commander and press D until 4 appears.

The day of the week, Th (Thursday) is automatically set.

- 2 Set the hour to start recording with ② TURN ON
- 3 Set the minute to start recording with ② TURN ON
- 4 Set the hour and minute to end recording with ③ TURN OFF H and M.
- 5 Set the recording mode, SP or LP, with the REC MODE button.
- 6 Select the desired programme position with PROG button.

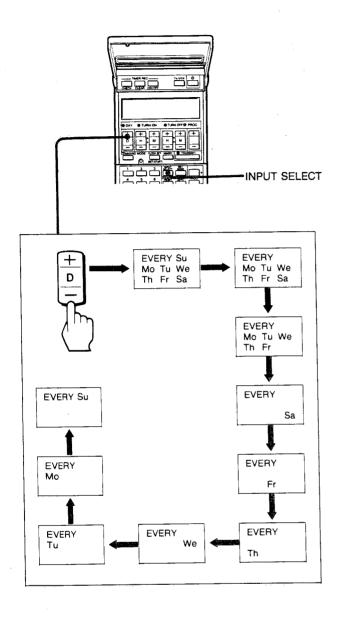
The "TRANSMIT" indicator blinks to indicate that all of the items are entered.

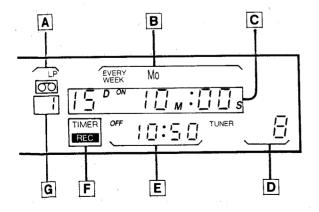
7 Point the Commander to the VTR and press TRANSMIT.

Transmitting should be done within five minutes. The VTR produces beep sound and enters the recording standby mode.

8 Close the cover of the Commander so that the present time appears on the LCD display.

The VTR turns itself on and starts recording at the selected time, then turns off after the recording ends.





To set another programme

Repeat steps 1 to 7 before 8.

To record from the equipment connected to LINE IN VIDEO/AUDIO 1 or 2 jacks

Press INPUT SELECT in step 6 on the previous page to change the indication from PROG to LINE, L1 or L2. Then select as connected.

Making Daily/Weekly Recording

This VTR can be preset to record the same programme each day of the week (daily recording) or the same programme on a specific day of the week.

Instead of step 1 under "Setting the Timer", press D – on the Commander to change the LCD in the order shown in the illustration. When the desired recording mode is set and transmitted to the VTR, the corresponding indicator lights in the display window.

Notes

Active buttons during timer-activated recording

- TIMER CHECK button
- COUNTER RESET button
- TV/VTR button (Viewing a programme while recording another programme is possible.)

After a preset recording is over, the numbers of presettings are moved up in turn.

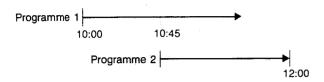
Indication in the Display Window on the Unit

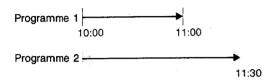
A few seconds after the transmitting, press the TIMER CHECK button then indication will appear as shown in the illustration.

- A Rec mode SP/LP (Tape speed)
- B A day of the week
- C Starting time
- **D** Channel to be recorded
- E Ending time
- F TIMER REC indication

(Turns on when timer setting programme is set. TIMER REC indication is shown even when power is off.)

|G| Programme order number (6 timer settings available)





When the Timer Settings Overlap

If the settings for two programmes overlap

The recording of programme 2 will begin before the programme 1 is finished.

In the illust.: (The coloured portion will not be recorded.)

If the turn-on time of two programmes are the same

The recording of the programme having the lower programme number (ex. programme 1) will be made. The memory of the programme having the higher number will be cleared.

In the illust.: (The coloured portion will not be recorded.)

To record using the entire tape

Skip the turn-off time setting or set it to a time after the tape will reach the end.

Note

If the starting time of the former setting and the ending time of the latter setting are the same, about twenty seconds of the last portion of the former will be missing.

Caution

If a short beep occurs when TRANSMIT is pressed A short beep indicates that the transmission was not received by the VTR. Press TRANSMIT again before closing the cover, then check the items below.

- · An illogical setting has been made.
- Timer setting can only be performed when the VTR is turned off, or in the stop, or timer recording mode.
- Six timer settings have already been made.
- . The tape is at its end.
- The clock on the unit does not correspond to the one on the Commander.

When the cassette is ejected by pressing the TRANSMIT button or the TIMER REC ON/OFF button $\,$

• The opening on the cassette rear is red (closed). Slide the tab in, to open or insert a new cassette.

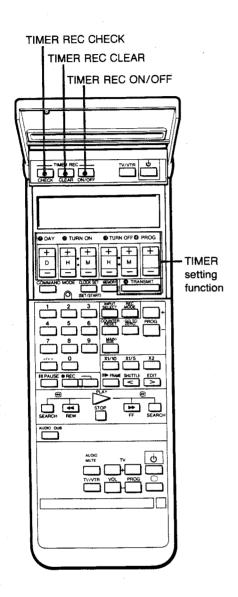
When the TIMER REC ON/OFF button is pressed "TIMER REC" does not appear the display window on the unit

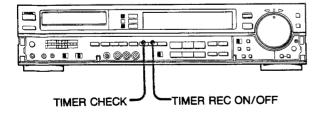
- . The cassette for recording is not inserted.
- · The cassette is at its end.
- The timer setting is not set on the unit.

If a power interruption occurs

Recording will stop and power will turn off.

If the power interruption lasts for about 1 hour or less and recording time remains, recording will resume after the power comes back on.





Checking the Timer Setting

Press the TIMER REC CHECK button one time after another to display set programmes in order.

Changing a Preset Timer Setting

- 1 Press the TIMER REC ON/OFF button to clear the TIMER REC indication.
- Press the TIMER REC CHECK button to select the programme number to be changed.
- Set another programme with the Commander then press the TRANSMIT button.
 The new programme has been set and "TIMER REC" indicator on the unit turns on.

Clearing a Preset Timer Setting

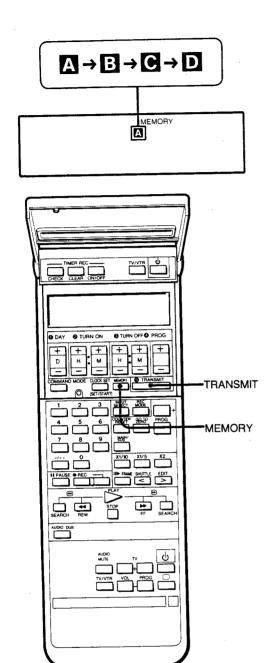
- 1 Press the TIMER REC ON/OFF button to clear the TIMER REC indicator.
- 2 Press the TIMER REC CHECK button, then select the programme number to be cleared.
- 3 Press the TIMER REC CLEAR button.
- When other timer settings exist, press the TIMER REC ON/OFF button to turn the "TIMER REC" indicator on.

Stopping Timer-Activated Recording in Progress

Press the TIMER REC ON/OFF button. Recording will stop.

Using the Unit before Timer-Activated Recording Starts

- To start using the VTR
 Press the TIMER REC ON/OFF button to turn off the
 "TIMER REC" indication in the display window on the
 unit
- To quit using the VTR
 Press the TIMER REC ON/OFF button to turn on the
 "TIMER REC" indication in the display window on the
 unit.



To Store the Frequently Used Items in the Commander

The items selected for one timer recording programme will be erased from the LCD when the Commander cover is closed.

However, the turn-on/turn-off time and the programme position of up to four programmes can be stored in the Commander to be recalled later.

This enables you to quickly access the most frequently used items, especially your favourite weekly programmes. The recording date will automatically be shifted to the next week after the recording is over.

It will be cleared from the programme list when recording is over.

Operation

Example: To store a timer recording data in MEMORY A.

- 1 Press MEMORY to indicate MEMORY A.
- 2 Set all of the items for timer recording referring to "Timer-Activated Recording-Setting the timer."
- Press MEMORY to change the indication to B, C, or D, and repeat step 2 for other programmes.

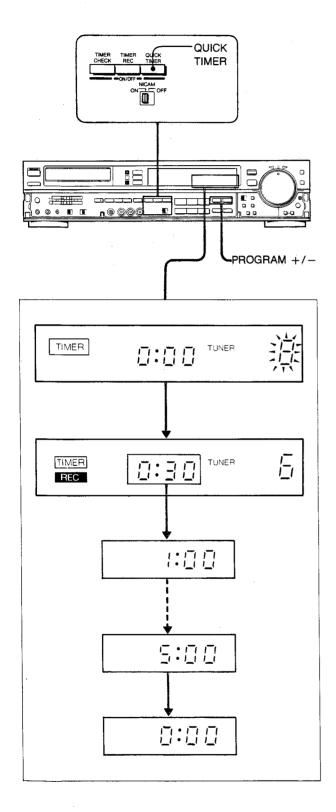
 The items set will be kept in the memory even when the Commander cover is closed.

Recalling and Changing the Items

- Press MEMORY to call up the desired memory indication (A, B, C, or D).
- 2 Make whatever changes necessary.
- **Press TRANSMIT.**The VTR enters the timer recording standby mode.

How to clear a memory

A timer setting memory can not be cleared. But it will be replaced with new one(s) by pressing MEMORY to call one(s) of A to D.



What is Quick Timer Recording?

With the quick timer recording function, simple and rough timer recordings can be made. The timer can be set to operate within 5 hours in units of 30 minutes.

Operation

1 Check the following items.

INPUT SELECT : Displays "TUNER" in the

window

REC MODE SP/LP: SP or LP

REC LEVEL : Approximate standard on 5

(not provided on position

UK model)

2 If the cassette is not inserted, insert it.

2 Press the QUICK TIMER button

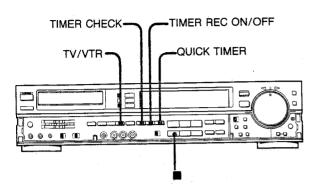
The channel can be changed while the channel indicator is blinking (for about 25 seconds).

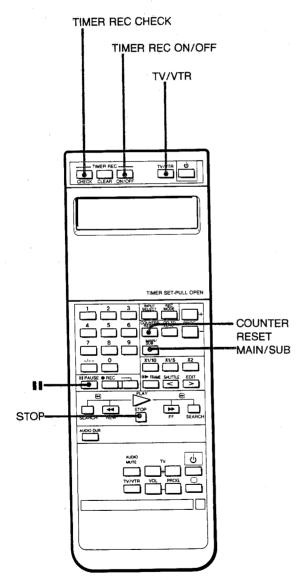
Press the QUICK TIMER button repeatedly to select recording time.

Each press of the button increases the preset recording time up to 5 hours in units of 30 minutes.

When the TIMER COUNTER counts down to "0:00", the VTR is stopped and the power is turned off.

During quick timer recording, the recording time can be changed by pressing the QUICK TIMER button. During recording, the time displayed will count down in units of one minute.





Function available during Quick Timer Recording

Stopping recordings in progress

Press the TIMER REC ON/OFF button. (The ■ STOP button does not work.)

Changing recording time

Press the QUICK TIMER button

Checking the timer

Press the TIMER CHECK button. (Preset programmes will be displayed in the window on the unit.)

Resuming "0H00M00S" on the counter preset programme

Press the COUNTER RESET button.

Monitoring another channel

Press the TV/VTR button.

Monitoring bilingual sound

Press the MAIN/SUB button.

Caution

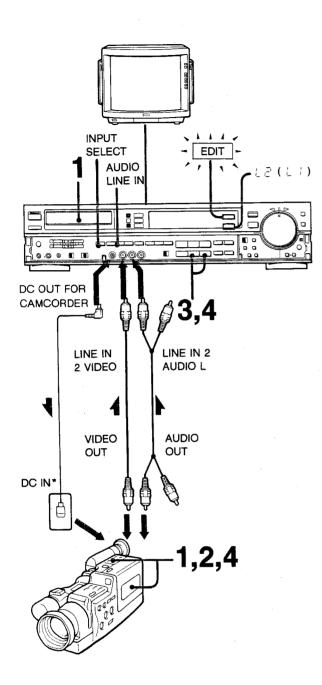
- The QUICK TIMER button does not work during the timer setting standby mode. Press the TIMER REC ON/OFF button to clear the "TIMER REC", then press the QUICK TIMER button again.
- When the opening on the cassette rear is red (closed), the tape cannot be recorded.

Then, if the QUICK TIMER button is pressed, the cassette will be ejected. Insert a cassette with its opening unclosed (not red) and press the QUICK TIMER button again.

If a power interruption occurs

Recording will stop and power will turn off.

If the power interruption lasts for about 1 hour or less and recording time remains, recording will resume after the power comes back on.



shows the direction of the signal flow.

To Edit the Entire Tape to Another Tapes

When a video camera recorder or another VTR is connected to this VTR via the CONTROL L & (LANC) jack, the synchronized editing function can be used (see page 38).

(1) Editing a tape on this VTR from a video camera recorder or another VTR

Example: Using a video camera recorder as the player via the LINE IN 2 AUDIO/VIDEO jack on this VTR.

Preparation

- Connect the equipment involved. If the video camera recorder is a monaural type, connect the white plug (AUDIO L) of the supplied connecting cable to the audio jack. (When stereo, connect to L and R.)
- Select the REC MODE (tape speed) on this VTR,SP or LP, using the REC MODE SP/LP button.
- Press the INPUT SELECT button to select LINE IN 2.
 Then "L2" will appear in the display window on this VTR. (When connected to LINE IN 1, press the button to select LINE IN 1 and to display "L1" in the display window.)
- Press the EDIT button so that "EDIT" appears in the display window.
- Adjust the REC LEVEL control to around 5. (unnecessary for UK model)

Caution

DC OUT FOR CAMCORDER jack and DC in cord are not provided on UK model.

Operation

- 1 Turn on the power of the equipment to be used. Insert the original cassette into the player and a new cassette into this unit.
- 2 Set the player to the playback pause mode and set the EDIT button to ON.
- 3 Set this unit to the recording pause mode.
- 4 Release the pause modes simultaneously.

Note

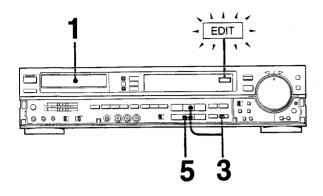
LINE IN 1 VIDEO/AUDIO can be also connected to for use.

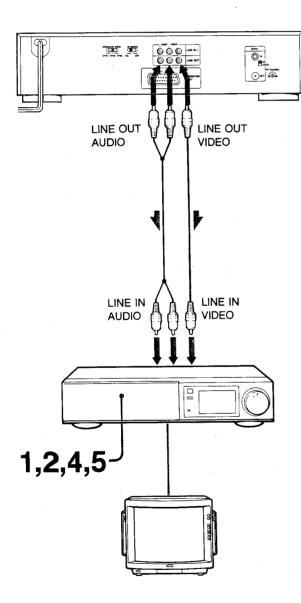
Editing from a tape on which the bilingual broadcast is recorded

When editing on this VTR via VIDEO/AUDIO LINE IN jack from another VTR, press the AUDIO LINE IN button to display "MAIN" in the display window. Then the MAIN/SUB sound is recorded on both standard and PCM tracks. (only on the standard track for UK model) After editing, press the button again to display "STEREO".

 Playback the tape on the other VTR with displaying MAIN/SUB/.

- Refer to the instruction manual of the other VTR.
- * DC in cord (supplied) supplies DC power for the Sony 8mm video camera recorder directly. (for Continental Europe model only)





shows the direction of the signal flow.

(2) Editing a tape on another VTR from this unit When this unit is the player and another VTR is the recorder:

Operation

- 1 Turn on the power of the equipment to be used. Insert the original cassette into this unit and a new cassette into the other VTR.
- 2 Set the input select switch of another VTR to LINE.
- 3 Set this unit to the playback pause mode and press the EDIT button. The "EDIT" indication will light in the display window.
- 4 Set the other VTR to the recording pause mode.
- 5 Release the pause modes simultaneously.

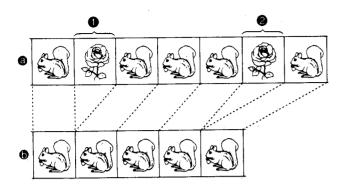
The EDIT button

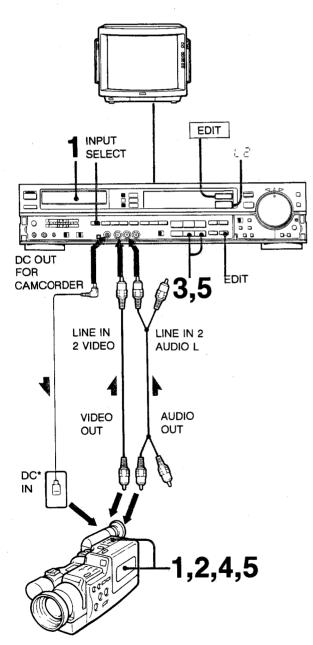
When editing a tape, press this button so that the "EDIT" indication lights in the display window. Deterioration of picture quality will be avoided. Press again after editing.

The SHARPNESS control will not function when the EDIT button is pressed.

Notes

- Avoid repetition of editing tapes, as the picture and tone quality will be impaired noticeably for newly edited tapes.
- When you make the recording and playback connections simultaneously to the same VTR, noise may come out.
- When another VTR is a monaural type, use the optional RK-C72 connecting cable.





shows the direction of the signal flow.

Editing only Desired Scenes

Cutting out unnecessary scenes
If another VTR has the CONTROL L & (LANC) jack, the synchronized edit function can be used (see page 38).

- @ original tape
- edited tape
- 1 cut out
- 2 cut out

Example: Using a video camera recorder as the player via the LINE IN 2 AUDIO/VIDEO jack on this VTR.

Preparation

- Select the tape speed, SP or LP, on this VTR using the REC MODE selector.
- Press the INPUT SELECT button to select LINE IN 2, then "L2" will appear in the display window on this VTR. (When connected to LINE IN 1, press to select LINE IN 1, then "L1" will appear in the display window.)
- Set the EDIT button to ON then "EDIT" will appear in the display window.
- Adjust the REC LEVEL control to around 5 position. (unnecessary for UK model)

Caution

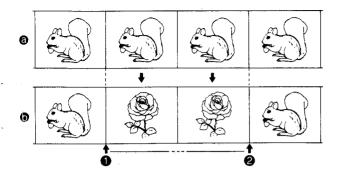
DC OUT FOR CAMCORDER jack and DC in cord are not provided on UK model.

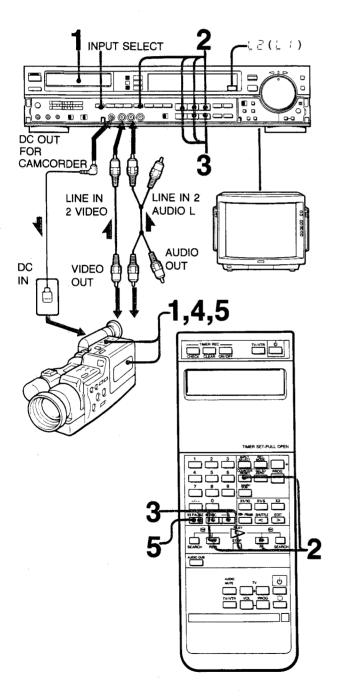
Operation

- 1 Turn on the power of the equipment to be used. Insert the original cassette to the player and a new cassette into this unit.
- **2** Set the EDIT switch to ON.
- 3 Edit the tape while viewing the playback picture, and set this unit to the recording pause mode at the point where no picture has been recorded.
- Set the player to the playback pause mode at the point where the desired picture is recorded.
- 5 Release the pause modes simultaneously.

Repeat steps 4 to 5 for recording other desired scenes.

* DC in cord (supplied) supplies DC power for the Sony 8mm video camera recorder directly. (for Continental Europe model only)





Insert Editing

Inserting another scene into a recorded tape (original tape) is called "Insert Editing". This technique is used to replace an unnecessary scene with another one.

If the other VTR has a CONTROL L & (LANC) jack, the synchronized edit function can be used.

- @ original tape
- edited tape
- starting point
- 2 ending point

Preparation

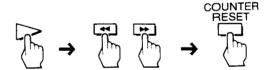
- Set the REC MODE SP/LP to the same mode of the recorded tape (original tape).
- Press the EDIT button so that EDIT appears in the display window.
- Adjust the REC LEVEL control to around 5 position. (unnecessary for UK model)

Caution

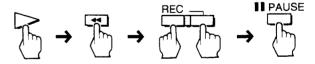
DC OUT FOR CAMCORDER jack and DC in cord are not provided on UK model.

Operation

- 1 Turn on the power of the equipment to be used. Insert the cassette with the scenes into the player. Insert the original cassette into this VTR.
- 2 Locate the ending point on the original tape by pressing ◀◀ REW or ▶▶ FF button during playback. Then press the COUNTER RESET button (0H00M00S).



3 Locate the starting point on the original tape by pressing ◀◀ REW button during playback. Set this VTR to the recording pause mode.



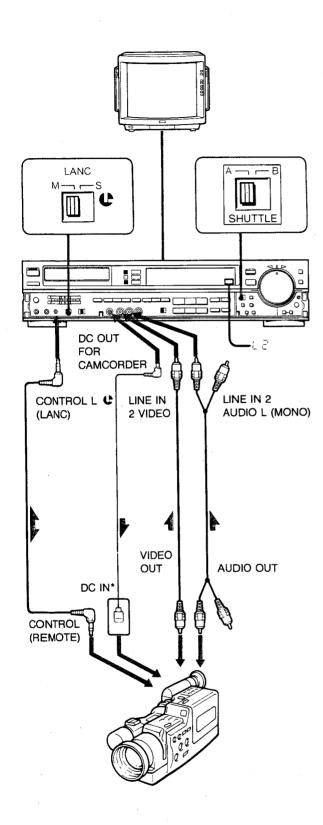
- 4 Locate the starting point of the scene to be inserted on the player and set it to the playback pause mode.
- Felease the pause modes simultaneously. The recording stops automatically at the ending point (0H00M00S).

For better editing

Release the playback pause mode a little earlier than the recording pause mode.

Note

When the edited tape is played back, the picture may be disturbed momentarily at the ending point.



shows the direction of the signal flow.

Overview

When a Sony VTR with the CONTROL L & (LANC) jack or a video camera recorder is connected, the synchronized editing function can be used.

This function allows one VTR to control another VTR while editing. (Connect to the LINE IN 2 AUDIO/VIDEO on this VTR.)

LANC switch

This switch is used to select control of the other VTR with this VTR, or control of this VTR with the other VTR.

M: Controls the other VTR with this VTR.

S: Control this VTR with the other VTR or editor.
When both VTRs have a LANC switch, decide which is to be M and which is S. Then select the LANC switch on both VTRs accordingly.

Selecting SHUTTLE A-B switch

Select the SHUTTLE A-B switch according to the type of VTR connected to this VTR.

- **A:** The player VTR or camcorder without the JOG/SHUTTLE controls the other VTR (recorder) and any option is not applicable.
- **B:** The player VTR with the JOG/SHUTTLE controls the other VTR or an option is applicable.

Connection

Example: When a video camera recorder is used as the player.

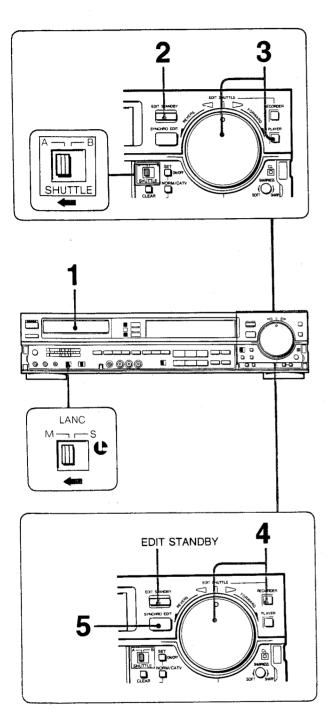
Note

When the video camera recorder is a monaural type, connect the white plug of the supplied connecting cable to the AUDIO L jack. (When stereo, connect to L and R.)

* The power for the Video Camera Recorder (DC 7.5 V 1.6 A) is supplied from the DC OUT FOR CAMCORDER jack on the unit with supplied DC in cord. (not provided on UK model)

Caution

DC OUT FOR CAMCORDER jack and DC in cord are not provided on UK model.



Preparation

- Select the tape speed, SP or LP, on REC MODE SP/LP button on this VTR.
- · Select A on the SHUTTLE A-B switch.
- · Select M on the CONTROL L switch.
- Connect the Video Camaera Recorder to the LINE 2 jack.
- Adjust the REC LEVEL control to around 5 position. (unnecessary for UK model)

Operation

1 Turn on the power of the equipment to be used. Insert the cassette.

Insert a cassette for recording into this VTR and a recorded cassette into the other VTR.

Press the EDIT STANDBY button.

 The EDIT STANDBY indicator and the player indicator will light. The LINE IN switch is set automatically to LINE IN 2 (L2).

The Video Camera Recorder (player side) enters the playback pause mode and this VTR enters the recording pause mode.

The picture from the player will be displayed on the screen.

3 Search for the starting point to be recorded on the player.

If the PLAYER button indicator does not light up, press the PLAYER button to turn the indicator on. Then search for the starting point of the scene to be recorded on the player tape using the EDIT SHUTTLE control.

Release your finger from the EDIT SHUTTLE at the starting point to resume the playback pause mode.

Press the RECORDER button on the recorder to light the indicator up. Search for the starting point to be recorded over using the EDIT SHUTTLE control.

To search for the point to be recorded over on the recording tape, turn the EDIT SHUTTLE to change to the picture on the recorder.

Release your finger from the EDIT SHUTTLE at the starting point to resume the recording pause mode. The screen will display the picture on the player.

F Press the SYNCHRO EDIT button.

Both the player and the recorder are released from the pause mode. Then playing and recording will start.

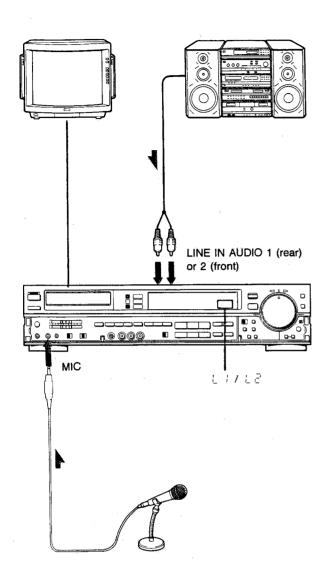
Notes

- Operate as described in steps 3 and 4 above to select the starting point for recording/playback. Press the SYNCHRO EDIT button again to start editing.
 Repeat the steps 3 to 5 to edit.
- With some models, it may take some time for the still picture to become stable after searching. Make sure that the still picture has been stable, then perform the Synchronized editing.

To stop the synchronized editing

Press the EDIT STANDBY button. The lamp lights off and both the player and the recorder enter the stop mode. The INPUT SELECT will change to TV and the received TV programme will appear on the screen.

Dubbing the Audio Signals (not provided on UK model)



shows the direction of the signal flow.

You can additionally record music or narration on the PCM track of your tape, while the picture and sound prerecorded on the standard track are unchanged.

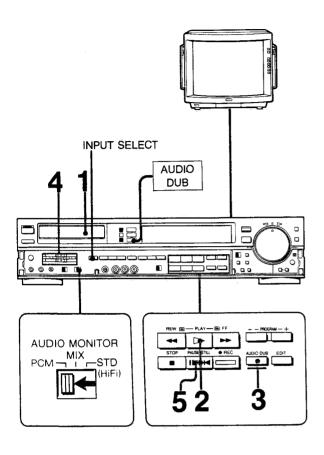
Connection on the Audio Source

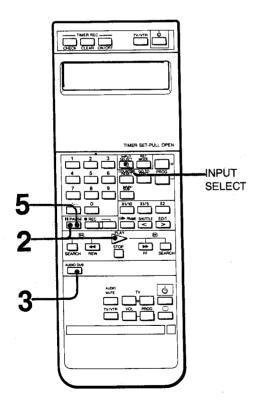
Notes

- · Sound from the microphone is recorded in monaural.
- When the microphone is not in use, do not connect the microphone to the MIC jack or the sound will be mixed with the sound from the LINE IN AUDIO 1 or 2.
- · Refer to each instruction manuals.

Tips for dubbing

- For fade-in operation, adjust the REC LEVEL control from the zero point to the normal position.
 For fade-out operation, turn it from the normal position to the zero point (LINE IN AUDIO only).
- The sound from the LINE IN AUDIO 1 jack on the rear panel or LINE IN AUDIO 2 jack on the front panel and the MIC jack can be mixed.
- Adjust the balance of the sound on the standard track and the sound dubbed on the PCM track with the REC LEVEL control.





Preparation

- Turn on the TV and select the channel for the VTR or select the input for the VTR.
- Set the AUDIO MONITOR selector to PCM.
- Press the INPUT SELECT button so that the L1 or L2 indication lights up.
- Adjust the REC LEVEL control to an appropriate level watching the level meter.

Operation

- 1 Insert the cassette.
- While viewing the picture, decide the point to start audio dubbing and press the II/►I◄ PAUSE/STILL button.
- 3 Press the AUDIO DUB button.
- 4 Playback the audio sources and adjust the REC LEVEL.
- Press the II/►I PAUSE/STILL button to release the pause mode, and at the same time start the audio source.

To stop audio dubbing momentarily

Press ■ ■/▶■ PAUSE/STILL or ■ PAUSE on the

Commander.

To stop audio dubbing Press ■ STOP.

To dub sounds from the TV

Press the INPUT SELECT button to select the "TUNER". Other operations are the same as the above steps.

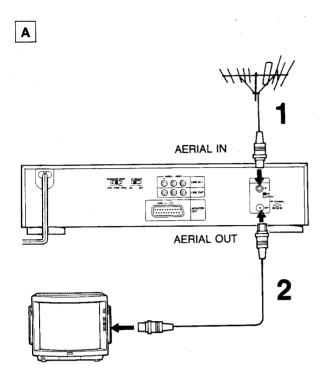
Notes

- The dubbed sound cannot be played back by a VTR without PCM recording or playback functions.
- The pre-recorded sound on the PCM track will be erased by dubbing.



During dubbing, black bars will appear in the center and lower positions of the screen. But it has no effect on the recorded images.

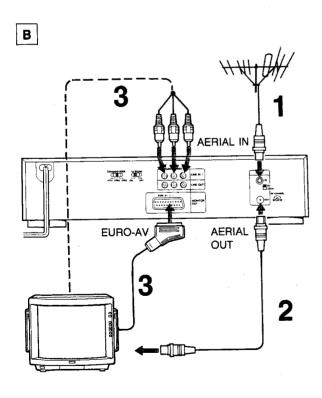
Picture may shake or colours may fade with certain TVs.



Notes

- Unplug each unit from the mains outlet before making the following connections.
- Make sure the connections are secure. A loose connection may cause a noisy picture.
- A Connecting a TV without Video/Audio Input Jacks
- Remove the aerial cable from its socket on the TV.

 Then connect the aerial cable to AERIAL IN on the recorder.
- 2 Connect the aerial input of the TV to AERIAL OUT on the recorder, using the supplied cable.

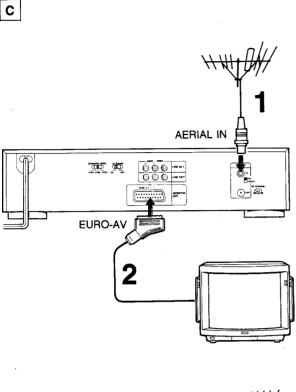


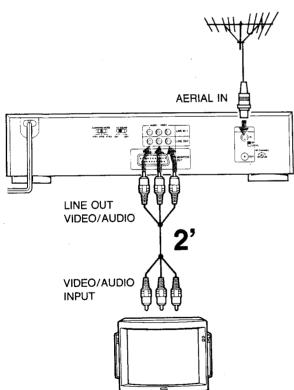
- Connecting a TV Equipped with Video/Audio Input Jacks
- Remove the aerial cable from its socket on the TV.

 Then connect the aerial cable to AERIAL IN on the recorder.
- Connect the aerial input of the TV to AERIAL OUT on the recorder, using the supplied cable.
- 3 Connect EURO-AV of the recorder to the audio/video inputs (VIDEO/AUDIO IN, MULTI IN, or 21-pin SCART or PERI-TV) on the TV using an appropriate cable.

This connection provides better-quality playback picture and sound.

Now the recorder is set up to intercept all signals from the aerial on their way to the TV. The recorder then passes on the signals to the TV. This is why you can record a programme while it is being shown on the TV, or while the TV is showing another programme, or even when the TV is turned off.





- C Connecting a Colour Monitor
- 1 Connect the aerial cable to AERIAL IN on the recorder.
- Connect EURO-AV on the recorder to the audio/video inputs (VIDEO/AUDIO IN, MULTI IN, or 21-pin SCART or PERI-TV) on the monitor using an appropriate cable.
- 2' Connect to the AUDIO/VIDEO inputs on the monitor using 3 phono to 3 phono connecting cord.

Note

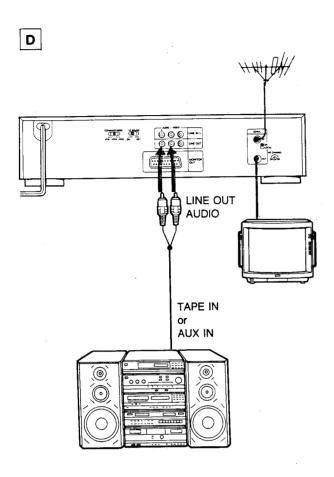
To use the Sony KX-series colour monitor, connect the recorder to the BNC-type VIDEO IN and phono-type AUDIO IN connectors on the monitor.

Notice on connection with a colour monitor

Connection between AERIAL OUT of the recorder and the colour monitor is not possible since the monitor is not equipped with a tuner. For this reason, you cannot watch a TV programme while recording another programme on the recorder.

Notice for customers in a strong signal area

The recorder has a booster to assure stable TV reception. However, in areas near TV stations, where the TV signal is very strong, the picture may be affected by the booster. If this happens, set DX/LOCAL on the rear panel to LOCAL.



D Connecting an Audio System

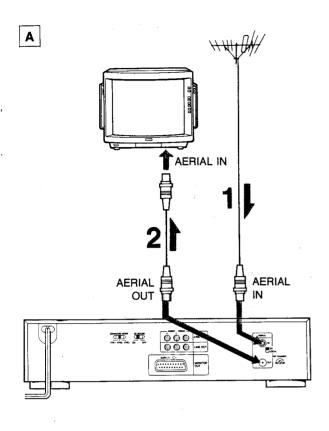
You can listen to the sound of a cassette by connecting your stereo system.

Connect LINE OUT AUDIO of the VTR to the TAPE IN (or AUX IN) jack of a stereo amplifier.

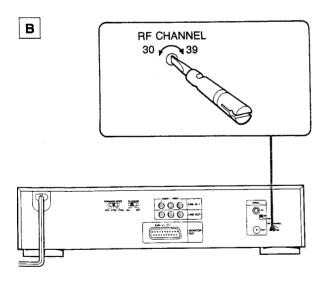
Notes

- If the VTR is installed near a tuner or a radio, noise may occur
 in the AM reception. In this case, do one of the following: keep
 the VTR away from the tuner or the radio; adjust the AM bar
 antenna for minimum noise; or connect an external AM antenna
 to the tuner.
- Note that a PCM recorded cassette reproduces sounds over a wide dynamic range. Adjust the volume carefully to protect your speaker from damage.
- Before connecting or disconnecting the power cord of the VTR, be sure to turn the amplifier off.

Adjusting the TV (To connect this VTR to a TV without video/audio inputs)



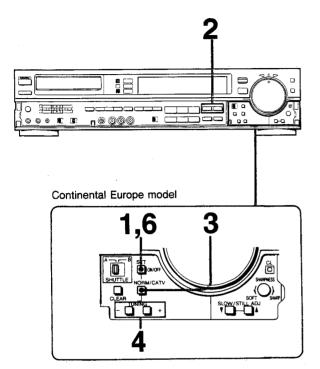
- A Making connections
- 1 Unplug the aerial's lead from the TV and plug it into AERIAL IN on the VTR.
- Plug the supplied coaxial cable into the TV and the AERIAL OUT on the VTR.

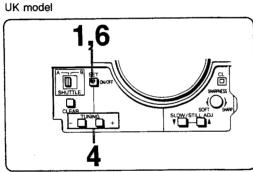


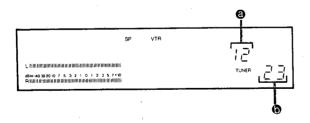
- B Adjusting the RF channel
- 1 Turn the TV on and select an empty programme.
- 2 Turn the VTR on and playback a prerecorded tape. (See page 14)
- Adjust the TV so the tape that is played back appears clearly on the screen.
- If the playback picture is not free of disturbance, use the supplied screwdriver to adjust the RF CHANNEL to a channel which is not active in your

Note

Now your TV is tuned to receive the VTR's playback picture. Whenever you playback a tape, select the programme you chose in step 1. If you are not sure how to tune your TV, refer to the TV's instruction manual or consult your dealer.







Selecting TV Channels

This VTR is capable of receiving the following channels: Continental Europe model

VHF channels E2 – E4, E5 – E12 UHF channels E21 – E69

Cable TV channels S01 – S03, S1 – S20 and S21 – S41 UK model

UHF channels B21 - B68

- The receivable channels are governed by the TV broadcasting system in your area.
- Up to 60 channels can be allocated to any desired programme position.
- 1 Press SET button.
- 2 Select the desired programme position by pressing PROGRAM +/-.
- 3 Select the normal programmes or CATV programmes with the NORMAL/CATV button. (For UK model, skip this step)
 CATV will be displayed when CATV is received into the TV set.
- Press TUNING +/- button and select the channel number
- 5 To allocate a channel to the next programme position, repeat steps 2 to 4.
- 6 Press SET button again.

To Allocate the Channels Directly

In step 4, enter the desired programme numbers using the programme position number and -/- buttons on the Commander.

To enter one's digits, press 0 and then the desired number. To enter two digit numbers, press -/--, the ten's digit number, and lastly the one's digit number.

Channel scanning on your VTR

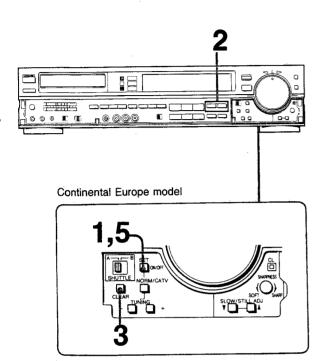
When TUNING + is pressed in step 4, channels are scanned in the following order. When TUNING - is pressed the scanning order is reversed.

Continental Europe model

VHF (E2 – E12) \rightarrow UHF (E21 – E69) \rightarrow CATV (S1 – S20) \rightarrow HYPER BAND (S21 – S41) \rightarrow CATV (S01 – S03). UK model

UHF channels B21 - B68

- @ Programme position
- Channel number



UK model

Erasing Unwanted Programme Positions

The VTR can be preset so that only the desired programme positions will appear when you press PROGRAM $\pm 1/-1$.

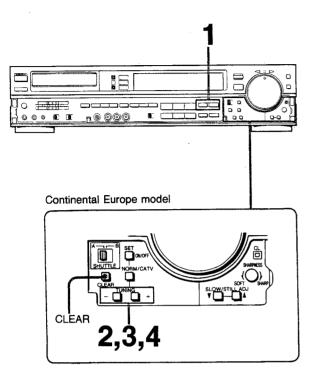
- 1 Press SET button.
- **2** Press PROGRAM +/- for displaying the unused programme position.
- 3 Press CLEAR.
- 4 Repeat steps 2 and 3 to erase other programme positions.
- 5 Press SET.

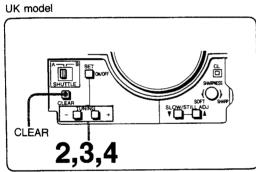
To enter the erased programme positions again Follow the procedure in "Selecting TV Channels."



- SP VTR TUNE AFT

 L DEBUNGH HER ARBEITH AND BERNE AND BER
- When the SET button is pressed
- When the CLEAR button is pressed







Manually Fine-tuning a Weak station

Normally set to AFT ON, the VTR automatically tunes the received channels.

However, when the programme received on the VTR is distorted due to signal interference, manual fine tuning may solve the problem.

- 1 Select the distorted programme position by pressing PROGRAM +/-.
- Press the TUNING +/- buttons simultaneously. The AFT indicator disappears. To resume the AFT ON mode, press the CLEAR button.
- Press the TUNING buttons + or for searching the clear displaying point.
- Press the TUNING +/- buttons simultaneously for setting.

Preceditions

On safety

- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not cover the holes on the top panel.
- Do not place the unit on surfaces (rugs, blankets,etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position. Do not install it in an inclined position.
- Keep the unit and cassette tapes away from equipment with strong magnets, as for example a microwave oven or a large loudspeaker and so on.
- Do not place any heavy object on the unit.
 Never place any object on the tuning compartment nor on the top of the front panel.

On operation

- When the unit is not in use, turn the power off to conserve energy and to extend its useful life.
- Remove and store a video cassette after recording or playback.

On cleaning

Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution.

Do not use any type of solvent, such as alcohol or benzine which might damage the finish.

On repacking

Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it as shown in the illustration on the carton.

On cassette care

Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.

On moisture condensation

Main Unit

Do not operate the unit right after having transported it from a cold location to a warm location or in a room where the temperature rises suddenly, because moisture may condense in the operating section of the unit. Wait for about an hour before turning the power on in the new location or keep the rise in room temperature gradual. If the unit is operated with moisture condensation, the unit and the tape may be damaged. Therefore remove the tape immediately when there is a possibility of moisture condensation and no picture is obtained. To evaporate the moisture rapidly, leave the player turned on without a tape loaded.

Cassette

When a cassette tape is carried from a cold place to a warm place, the cassette tape may become wet with dew created by moisture condensation. When there is any possibility of moisture condensation, eject the cassette tape and leave it outside of the compartment for about one hour.

If you have any questions about this unit, contact your Sony dealer.

Socialiteations

System

Video recording system

Rotary two-head helical scanning

FM system

Audio recording system

Standard: Rotary head, FM system

(2 channels)

PCM (not provided

Colour system

on UK model): PCM system (2 channels) CCIR system B, G, and H, PAL

colour

Usable cassettes Tape speed

8 mm video format cassettes SP: approx. 20.051 mm/sec. LP: approx. 10.058 mm/sec.

Recording/playback time

SP: 1 hr 30 min.

LP: 3 hrs.

(with Sony P5-90 cassette)

Fast-forward/rewind time

Approx. 4 min. (with sony P5-90

cassette)

Tuner section

Channel coverage

EV-S550E

VHF channels E2 - E4, E5 - E12 UHF channels E21 - E69 Cable TV channels S01 - S03, S1 - S20 and S21 - S41

EV-S550E (UK model)

B21 - B68

Programming system RF output signal

60 programme-memories

EV-S550E

UHF channels E30 to E39

(variable)

EV-S550E (UK model)

UHF channels B30 to B39

(variable)

31.25 kHz

20 ~ 15 kHz

Aerial input

75 ohms, asynmetrical aerial

socket

PCM (not provided on UK model)

Sampling frequency Audio frequency

Dynamic range

More than 88 dB

Wow and flutter Less than 0.005% RMS

inputs and outputs

Video inputs

Video in phono jack

1 Vp-p, 75 ohms, unbalanced, sync

negative

Video outputs

Euro AV 21-pin (pin 19)

1 Vp-p, 75 ohms, unbalanced, sync

negative

Video out phono jack

1 Vp-p, 75 ohms, unbalanced, sync

negative

Audio inputs

Phono jack X2

Audio outputs

7.5 dBs (0 dBs=0.775 V rms) Euro AV 21-pin (pins 1 and 3)

Output impedance less than 1 kilohm -6 dBs with 10 kilohms

load, unbalanced

Audio out phono jack X2 -7.5 dBs (372 mV) (at load impedance 47 kilohms) less than

10 kilohms

Microphone input (not Minijack -60 dBs, for low

provided on UK model)

inpedance microphone

Stereo minijack -26 dBs, 8 ohms

Headphone jack

DC out for Camcorder 7.5 V DC. 1.6 A

(not provided on UK

model)

CONTROL L C

Stereo mini-mini jack

Timer

Clock Timer indication Crystal lock 24-hour cycle

Timer setting

Only for recording 6 events/

1 month max.

General

Weight

Power requirements

EV-S550E 220 V AC, 50 Hz

EV-S550E (UK model) 240 V AC, 50 Hz

EV-S550E Power consumption

27 W (42 W when camcorder

connected)

EV-S550E (UK model)

18 W

Operating temperature 5°C to 40°C (41°F to 104°F) 20°C to +60°C (-4°F to Storage temperature

+140°F)

Approx. 430 imes 100 imes 302 mm **Dimensions**

(w/h/d)

Approx. 17 imes 4 imes 12 inch

EV-S550E

Approx. 5.6 kg (12 lb 2 oz) EV-S550E (UK model)

Approx. 5.4 kg (11 lb 8 oz)

Accessories supplied

See pages 8, 9.

Remote Commander RMT-456 (Continental Europe model)/RMT-464 (UK model)

Remote control system

Infrared control

Command mode Power requirements Selectable VTR 1, 2 or 3

3 V DC

2 size AA batteries (IEC

designation R6)

Dimensions

Weight

notice.

Approx. 77.5 imes 20 imes 219 mm

(w/h/d)

Approx. $3 \times \frac{3}{4} \times \frac{8^{1}}{2}$ inches incl. projecting parts and controls Approx. 170 g (2.2 oz) without

batteries Design and specifications subject to change without

Notes on Video Heads

Video heads cleaning

VTRs used for a long time may play back the rough picture or do not display the picture. The possible cause may be the contamination of the video heads. In such a case, clean the video heads at first. Use the video head cleaning tape V8-25CLH (not supplied) or ask the Sony service personnel to clean the video heads.

If the picture is not clear when using a cassette tape of another type, sometimes it is effective to use the video head cleaning tape. Use it after reading the instruction manual carefully.

Video heads wear by long time using

If the VTR displays unclear picture after cleaning of the video heads, the replacement of the video heads is necessary. Consult the dealer or the Sony representative.

Check the video heads after 1,000 hours use.

VTR is a high precision machine. It must record on or play back from magnetic tapes where the image signals from the colour TV or the video camera recorder are recorded.

The video heads or mechanical parts to transport the tape are contaminated or worn from extended use. It is recommended to have the VTR checked (cleaning, oiling and replacing worn parts) at about 1,000 hours interval.

Use the video cleaning tape if you find the symptom as follows:

Normal picture



Symptoms caused by contaminated video heads



initial :

Unclear picture



• No picture



nterminal

The above symptoms may occur in playback.

The most possible cause of this may be the contamination of video heads.

Purchase the video cleaning tape V8-25CLH from your dealer or at a Sony shop.

Troubleshooting

The following checks will assist you in correcting most problems which you may encounter with your VTR. Should any problem persist after you have made these checks, consult your nearest Sony service facility. Before going through the check list below, first refer back to the connection and operation procedures.

Symptom	Possible causes and corrections
The ON/STANDBY switch does not function.	 The power cord is disconnected. The recorder is in the timer standby mode. (Press TIMER REC so that the TIMER REC indication goes off.)
The clock blinks showing "Su 0:00".	There has been a power interruption. Reset the clock time and timer settings.
Picture being recorded cannot be monitored on the TV screen.	 Press TV/VTR so that the VTR indication is displayed in the display window. The channel for the VTR is not correctly tuned on the TV.
TV programme is not clearly displayed on the TV screen or no picture is displayed on the screen.	 The VTR indication is not displayed. Press the TV/VTR button. The channel for the VTR is not correctly tuned or the video input is not selected on the TV.
When the ●REC buttons are pressed, the cassette is ejected.	The tab on the cassette is slid out (red). 6
Recording cannot be done correctly.	 The input is not selected correctly. The cassette is not inserted. The connecting cord is not connected to the LINE IN VIDEO/AUDIO jacks.
Playback picture is not clearly displayed on the TV screen.	 The channel for the VTR is not correctly tuned or the video input is not selected on the TV. The video heads may be contaminated. Clean the heads using the Sony video head cleaning cassette. For details on cleaning, refer to the instructions furnished with the cleaning cassette. Adjust the SHARPNESS control. Hi8 recorded tape is played back.
Stereo programmes are heard in monaural	 Set the AUDIO MONITOR selector to PCM. (for continental Europe model only) No sound is recorded on the PCM track. The tape is audio dubbed.
The picture shakes in the picture search mode.	Adjust the vertical hold control on the TV.
Timer setting cannot be made.	The clock is not set. •
The cassette is ejected when the TIMER REC button is pressed.	The tab on the cassette is slid out.
A timer recording cannot be made.	 There has been a power interruption. The TIMER REC button has not been pressed. The cassette is not long enough to record. The clock is not set correctly.
The Remote Commander cannot be operated.	 The batteries are exhausted. 6 Set the COMMAND MODE, VTR1, VTR2 or VTR3, identically on both the unit and the Remote Commander. 6
Sounds from the LINE IN AUDIO jacks cannot be heard.	The REC LEVEL control is at lower level position. (for continental Europe model only)
The VTR does not operate by any button.	 The built-in microprocessor does not seem to work. Pressing the CL (reset) button with a pointed object, such as a ball point pen, may cause to resume. (All of the information such as the clock or the preset programmes stored will be cleared.)